Fei Xu

List of Publications by Year
in descending order

48 papers	1,742 citations	304368 22 h-index	276539 41 g-index
52 all docs	52 docs citations	52 times ranked	1186 citing authors

#	Article	IF	Citations
1	Dynamic and fluidâ€“structure interaction simulations of bioprosthetic heart valves using parametric design with T-splines and Fung-type material models. Computational Mechanics, 2015, 55, 1211-1225.	2.2	207
2	Overview of Computational Fluid Dynamics Simulation of Reactor-Scale Biomass Pyrolysis. ACS Sustainable Chemistry and Engineering, 2017, 5, 2783-2798.	3.2	152
3	A framework for designing patientâ€specific bioprosthetic heart valves using immersogeometric fluidâ€“structure interaction analysis. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2938.	1.0	93
4	The tetrahedral finite cell method for fluids: Immersogeometric analysis of turbulent flow around complex geometries. Computers and Fluids, 2016, 141, 135-154.	1.3	91
5	Compressible flows on moving domains: Stabilized methods, weakly enforced essential boundary conditions, sliding interfaces, and application to gas-turbine modeling. Computers and Fluids, 2017, 158, 201-220.	1.3	87
6	Optimizing fluidâ€“structure interaction systems with immersogeometric analysis and surrogate modeling: Application to a hydraulic arresting gear. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 668-693.	3.4	86
7	Coupling DAEM and CFD for simulating biomass fast pyrolysis in fluidized beds. Journal of Analytical and Applied Pyrolysis, 2016, 117, 176-181.	2.6	74
8	Modeling of a hydraulic arresting gear using fluidâ€“structure interaction and isogeometric analysis. Computers and Fluids, 2017, 142, 3-14.	1.3	74
9	Modeling the impact of bubbling bed hydrodynamics on tar yield and its fluctuations during biomass fast pyrolysis. Fuel, 2016, 164, 11-17.	3.4	73
10	A comprehensive review on the molecular dynamics simulation of the novel thermal properties of graphene. RSC Advances, 2015, 5, 89415-89426.	1.7	69
11	Direct immersogeometric fluid flow analysis using B-rep CAD models. Computer Aided Geometric Design, 2016, 43, 143-158.	0.5	62
12	A contact formulation based on a volumetric potential: Application to isogeometric simulations of atrioventricular valves. Computer Methods in Applied Mechanics and Engineering, 2018, 330, 522-546.	3.4	61
13	Major trends and roadblocks in CFD-aided process intensification of biomass pyrolysis. Chemical Engineering and Processing: Process Intensification, 2018, 127, 206-212.	1.8	52
14	Thinner biological tissues induce leaflet flutter in aortic heart valve replacements. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19007-19016.	3.3	50
15	An immersogeometric formulation for free-surface flows with application to marine engineering problems. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112748.	3.4	49
16	Computational investigation of left ventricular hemodynamics following bioprosthetic aortic and mitral valve replacement. Mechanics Research Communications, 2021, 112, 103604.	1.0	39
17	A Deep Learning Framework for Design and Analysis of Surgical Bioprosthetic Heart Valves. Scientific Reports, 2019, 9, 18560.	1.6	37
18	Immersogeometric analysis of compressible flows with application to aerodynamic simulation of rotorcraft. Mathematical Models and Methods in Applied Sciences, 2019, 29, 905-938.	1.7	34

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19	Rapid B-rep model preprocessing for immersogeometric analysis using analytic surfaces. Computer Aided Geometric Design, 2017, 52-53, 190-204.	0.5	30
20	Immersogeometric analysis of moving objects in incompressible flows. Computers and Fluids, 2019, 189, 24-33.	1.3	30
21	Multi-scale CFD modeling of gas-solid bubbling fluidization accounting for sub-grid information. Advanced Powder Technology, 2018, 29, 488-498.	2.0	29
22	Numerical Simulations of Two Back-To-Back Horizontal Axis Tidal Stream Turbines in Free-Surface Flows. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	1.1	29
23	Parameterization, geometric modeling, and isogeometric analysis of tricuspid valves. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113960.	3.4	22
24	Simulation and optimization of rice husk gasification using intrinsic reaction rate based CFD model. Renewable Energy, 2019, 139, 611-620.	4.3	21
25	Analytical Study of Articulating Turbine Rotor Blade Concept for Improved Off-Design Performance of Gas Turbine Engines. Journal of Engineering for Gas Turbines and Power, 2017, 139, .	0.5	20
26	High-Fidelity Finite Element Modeling and Analysis of Adaptive Gas Turbine Stator-Rotor Flow Interaction at Off-Design Conditions. Journal of Mechanics, 2020, 36, 595-606.	0.7	20
27	Experimental and kinetic studies on the intrinsic reactivities of rice husk char. Renewable Energy, 2019, 135, 608-616.	4.3	16
28	Variation of Geldart classification in MFM simulation of biomass fast pyrolysis considering the decrease of particle density and diameter. Renewable Energy, 2019, 135, 208-217.	4.3	13
29	Three phase heat and mass transfer model for unsaturated soil freezing process: Part 1 - model development. Open Physics, 2018, 16, 75-83.	0.8	12
30	Analytical study of transient counter-flow non-premixed combustion of biomass in presence of thermal radiation. Renewable Energy, 2020, 159, 312-325.	4.3	8
31	Spatiotemporal evolutions of forces and vortices of flow past ellipsoidal bubbles: Direct numerical simulation based on a Cartesian grid scheme. Physics of Fluids, 2021, 33, 012108.	1.6	8
32	Computational study of natural ventilation in a sustainable building with complex geometry. Sustainable Energy Technologies and Assessments, 2021, 45, 101153.	1.7	8
33	Macroscopic lattice Boltzmann model for heat and moisture transfer process with phase transformation in unsaturated porous media during freezing process. Open Physics, 2017, 15, 379-393.	0.8	7
34	Three phase heat and mass transfer model for unsaturated soil freezing process: Part 2 - model validation. Open Physics, 2018, 16, 84-92.	0.8	7
35	Immersogeometric thermal analysis of flows inside buildings with reconfigurable components. Journal of Thermal Analysis and Calorimetry, 2021, 143, 4107-4117.	2.0	7
36	Deicing performances of a road unit driven by a hydronic heating system in severely cold regions of China. Computers and Mathematics With Applications, 2021, 81, 838-850.	1.4	6

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37	Analytical modeling of lycopodium-propane dual-fuel combustion system in premixed mode in counter-flow configuration. Renewable Energy, 2021, 165, 783-798.	4.3	5
38	Numerical study of waterâ€“air distribution in unsaturated soil by using lattice Boltzmann method. Computers and Mathematics With Applications, 2021, 81, 573-587.	1.4	5
39	Thermal performances of saturated porous soil during freezing process using lattice Boltzmann method. Journal of Thermal Analysis and Calorimetry, 2020, 141, 1529-1541.	2.0	3
40	Modeling the dual-fuel combustion of porous lycopodium particles and diesel using an analytical simulation framework. Journal of Analytical and Applied Pyrolysis, 2022, 163, 105458.	2.6	3
41	Articulating Turbine Rotor Blade Concept for Improved Off-Design Performance of Gas Turbine Engines. , 2016, , .		2
42	Comparative analysis of refrigerant performance between LPG and R134a under subtropical climate. Journal of Thermal Analysis and Calorimetry, 2020, 139, 2925-2935.	2.0	2
43	Finite-element thermal analysis of flows on moving domains with application to modeling of a hydraulic arresting gear. Journal of Thermal Analysis and Calorimetry, 2021, 144, 963-972.	2.0	2
44	Pulsating diffusion flames fed with biomass particles in counter-flow arrangement: Zeldovich and Lewis numbers effects. Sustainable Energy Technologies and Assessments, 2021, 46, 101263.	1.7	2
45	Articulating Axial-Flow Turbomachinery Rotor Blade for Enabling Variable Speed Gas Turbine Engine. , 2018, , .		1
46	Optimizing Gas-Turbine Operation using Finite-Element CFD Modeling. , 2018, , .		1
47	Fluidâ€“Structure Interaction Modeling and Isogeometric Analysis of a Hydraulic Arresting Gear at Full Scale. Modeling and Simulation in Science, Engineering and Technology, 2016, , 463-476.	0.4	0
48	An Immersogeometric Method for the Simulation of Turbulent Flow Around Complex Geometries. Modeling and Simulation in Science, Engineering and Technology, 2016, , 111-125.	0.4	0